CLAIMS

1. A diffractive optical element, comprising:

a pair of diffraction gratings, said pair of diffraction gratings differing in dispersion from each other, said pair of diffraction gratings confronting each other through a space of a refractive index of 1,

wherein a maximum optical path length difference occurring in said pair of diffraction gratings with respect to each of at least two wavelengths is integer times the associated wavelength.

2. A diffractive optical element, comprising:

a pair of diffraction gratings, said pair of diffraction gratings differing in dispersion from each other, said pair of diffraction gratings confronting each other through a space of a refractive index of 1,

wherein a maximum optical path length difference occurring in said pair of diffraction gratings with respect to each of at least two wavelengths is integer times the associated wavelength, and peak portions and valley portions of said pair of diffraction gratings are chamfered.

3. A diffractive optical element, comprising:

a pair of diffraction gratings, said pair of diffraction gratings differing in dispersion from each other,

wherein a maximum optical path length difference occurring in said pair of diffraction gratings with respect to each of at least two wavelengths is integer times the associated wavelength, and peak portions and valley portions of said pair of diffraction gratings are chamfered.

4. A diffractive optical element, comprising:

a substrate; and

a diffraction grating formed on said substrate, wherein either or both of peak portions and valley portions of said diffraction grating are chamfered.

5. A diffractive optical element, comprising:

a pair of diffraction gratings, said pair of diffraction gratings differing in dispersion from each other, said pair of diffraction gratings confronting each other through a space of a refractive index of 1,

wherein a maximum optical path length difference occurring in said pair of diffraction gratings with respect to each of at least two wavelengths is integer times the associated wavelength, and peak portions and valley portions of said pair of diffraction gratings are formed in a chamfered shape.

6. A diffractive optical element, comprising:

a pair of diffraction gratings, said pair of diffraction gratings differing in dispersion from each

other,

wherein a maximum optical path length difference occurring in said pair of diffraction gratings with respect to each of at least two wavelengths is integer times the associated wavelength, and peak portions and valley portions of said pair of diffraction gratings are formed in a chamfered shape.

7. A diffractive optical element, comprising:

a substrate; and

a diffraction grating formed on said substrate, wherein either or both of peak portions and valley portions of said diffraction grating are formed in a chamfered shape.

8. An optical system, comprising:

a diffractive optical element according to one of claims 1 to 7; and

a lens system.